

SENIOR TRANSPORTATION OFFICERS QUALIFICATION COURSE

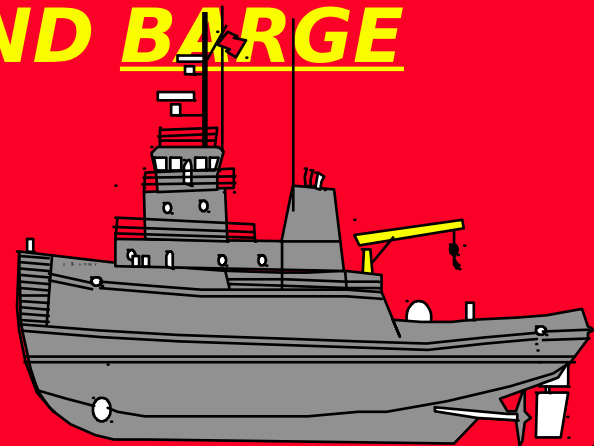
THROUGHPUT EVALUATION



THROUGHPUT EVALUATION

INITIAL PHASE

- ***INTRODUCTION OF UNIT EQUIPMENT***
- ***DEPENDS ON CAPABILITY TO DISCHARGE RORO AND BARGE CARRYING VESSELS***



THROUGHPUT EVALUATION

INITIAL PHASE

- CONDITION OF TERMINAL

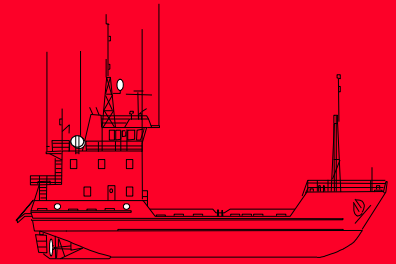
DISORGANIZED

EARLY DEVELOPMENT STAGE

UNABLE TO FULLY HANDLE

LARGE NUMBERS OF SHIPS

THROUGHPUT EVALUATION



TACTICAL RESUPPLY PHASE

- **TERMINAL FACILITIES IMPROVED**
- **NEITHER TERMINAL OR LAND NET CAN HANDLE LARGE VOLUMES OF CONTAINERS**
- **UNIT MOVES DROPS OFF SIGNIFICANTLY**

THROUGHPUT EVALUATION

SUSTAINED RESUPPLY PHASE

- TERMINAL WELL ORGANIZED
- THEATER AND TERMINAL HANDLES LARGE VOLUMES OF CONTAINERS
- AVAILABILITY OF FIXED PORT FACILITIES AND TYPES OF VESSELS AFFECT PORT CAPACITY

THROUGHPUT EVALUATION

STEPS IN OCEAN TERMINAL PLANNING

- DETERMINE THE TYPE OR CATEGORY OF EXISTING TERMINALS.
- ESTIMATE THE EXISTING TERMINAL THROUGHPUT CAPACITY.
- COMPUTE THE TERMINAL WORKLOAD NEEDED TO SUPPORT THE OPERATION.

THROUGHPUT EVALUATION

- **DETERMINE THE REPAIR AND REHABILITATION REQUIRED**
 - **ESTIMATE MHE NEEDS**
 - **ESTIMATE THE UNITS, INDIVIDUALS, AND SUPERVISORY AND COMMAND ELEMENTS**
- FM 55-60 **NEEDED TO OPERATE THE TERMINAL**

THROUGHPUT EVALUATION

- **TERMINAL RECEPTION CAPACITY**

NUMBER OF BERTHS OR ANCHORAGE'S

BASED ON PHYSICAL FEATURES

**EXPRESSED AS AN ESTIMATE OF
TONNAGE**

**IS A FUNCTIONAL OF WHARF AND
ANCHORAGE SIZE, WATER DEPTH,
AND VESSEL TRAFFIC**

THROUGHPUT EVALUATION

- **TERMINAL DISCHARGE CAPACITY**
 1. **BERTH CAPACITIES**
 2. **CAPACITY COMPUTATIONS**
 3. **INFLUENCES OF TRANSFER AND STORAGE OPERATIONS (*CAPACITIES*)**

THROUGHPUT EVALUATION

- **TERMINAL CLEARANCE
CAPACITY**

- 1. THE ABILITY TO CLEAR CARGO FROM
THE
TERMINAL**

- 2. CLEARANCE CAPACITY COMPUTATIONS:**

- a. RAIL CLEARANCE CAPACITY**

- b. HIGHWAY CLEARANCE CAPACITY**

- c. INLAND WATERWAY CAPACITY**

THROUGHPUT EVALUATION

- **LIMITING CAPACITY**

THE LESSER OF THE DISCHARGE, TRANSFER, OR CLEARANCE CAPACITY IS THE TERMINAL THROUGHPUT CAPACITY

- 1. SIGNIFICANT INFLUENCE**

- 2. OTHER FACTORS**

THROUGHPUT EVALUATION

- **STORAGE CAPACITIES**

INTRINSIC CAPACITY--- THE GROSS AMOUNT OF CONTAINERS, BREAKBULK, OR SQUARE FEET THAT CAN BE PLACED IN INTRANSIT STORAGE
(100%)

THROUGHPUT EVALUATION

**OPTIMUM CAPACITY--- 55% OF THE
GROSS OR
INTRINSIC CAPACITY**

**CONGESTION BEGINS--- IN MILITARY PLANNING
CONGESTION STARTS WHEN THE CAPACITY AT
THE STORAGE SITE REACHES 60% OF THE INTRIN
CAPACITY OF THAT AREA**

**FULL CONGESTION--- IS THE POINT WHERE
CARGO
IN THE STORAGE AREA IS 80% OF THE GROSS
OR
INTRINSIC CAPACITY OF THE AREA**